State of California

PROCEDURES

Required for Use of the

Ballot Nowä Voting System

These procedures have been adopted by the Secretary of State pursuant to Elections Code sections 19100 and 19205 and shall regulate and govern the use of the eSlate Electronic Voting System at all elections governed by the California Elections Code.

These procedures shall be effective beginning February 19, 2003 and shall be used in conjunction with all other statutory and regulatory requirements. Insofar as feasible, all procedures prescribed herein shall be carried out in full view of the public.

These procedures constitute a minimum standard of performance. They are not intended to preclude additional steps being taken by individual election officials to enhance the security and reliability of the electoral process.

Adopted, February 19, 2003

Change History

Version	Date	Author	Description
Rev A	11/11/02	Neil McClure	Initial release
Rev B	2/17/03	Neil McClure	Edited for system 2.1 changes
Rev C	12/9/03	Neil McClure	Added section 9.4.3 under Operational Security Updated formatting to be consistent with Hart docs.
Rev D	9/9/04	Neil McClure	Changes to security for certification of system 3.4

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1 Overview

1.1 Introduction

The Hart InterCivic eSlate™ Electronic Voting System is a completely integrated suite of products that offers the most streamlined and efficient method for conducting and reporting elections. The eSlate™ Electronic Voting System has these major components:

- The Ballot Origination Software System (BOSS)
- Precinct Voting System (PVS)
- Ballot Now
- Tally System (Tally)

Hart InterCivic's eSlate Electronic Voting System automates the balloting and tabulation process using a suite of hardware and software products. The eSlate system and its components provide central, regional, and precinct tabulation, as well as complete reporting and auditing. The system is bracketed by the ballot definition and tabulation functions. The Ballot Origination Software System, BOSS, provides the user the means to enter jurisdictional and election specific information. The tabulation function is supported by Tally and is used to accumulate the Cast Vote Records (CVRs) from the components of the system that interface with the voter. These voter interface components consist of the eSlate and Ballot Now. This procedure addresses the use of the Ballot Now paper ballot system.

1.2 Ballot Now Paper Ballot System

Ballot Now is a software application that handles the output and input of paper-based ballots within the Hart InterCivic eSlate Electronic Voting System suite of products. Ballot Now receives data from BOSS via the Ballot Now MBB and delivers data to Tally via the Ballot Now MBB. The system receives input from the user and scanned ballots, and provides the user with reports. Ballot Now is designed to support paper-based voting solutions, either as a stand-alone system for smaller entities or to complement the Hart InterCivic eSlate Electronic Voting System suite of products. Ballot Now manages a print-on-demand capability to print ballots for testing, sample ballots, and official ballots for delivery to the voter. The same information used to print the ballot is used to define a digital scanning template for processing ballots upon their return. Once the voter returns their marked ballot, Ballot Now uses a high-speed scanner for creating electronic images of the paper ballot, and then applies voting logic to the digital image and extracts the cast vote record. Ballot Now provides functionality to:

- Apply voting logic to preview and resolve overvoted and undervoted ballots, and write-ins
- Electronically store election records

- Manage the process of writing Cast Vote Record (CVR's) into the MBB for transfer to Tally for tabulation
- Supply a variety of reports about the ballot processing and related activities that can be viewed and printed at any time

Ballot Now is to be used only as central processing application and is not to be deployed to remote locations outside of central jurisdiction election headquarters.

1.3 Description of Support Components

1.3.1 Mobile Ballot Box™ (MBB)

A reusable, portable FLASH memory device, the **MBB** is used to store and transport election information to and from the polling places. The **MBB** is reusable and allows data to be stored to it many times. FLASH memory does not require batteries to maintain the data written to it.

When deployed to a Ballot Now station, the MBB contains:

- Election identification
- All possible ballot types in all required languages for the jurisdiction.
- A list of polling places, precincts, and allowable ballot types for each.
- Passwords (optional).

When all ballot have been processed by Ballot Now , the MBB also contains:

- Audit logs
- Cast vote records (CVRs)

The Mobile Ballot Box (MBB)

1.3.2 Ballot Origination Software System™ (BOSS)

The Ballot Origination Software System (BOSS) is a software application that accepts user input of jurisdictional and election specific information. BOSS is a Windows-based

program and uses a commercial database product to store and manipulate data. The ballot generation feature of BOSS creates electronic ballot styles based on the jurisdictional and election specific information supplied by the user. Ballot generation creates a single data file that is used to conduct the election at any polling location. The eSlate proprietary data file is written to multiple PC card memory devices called the Mobile Ballot Boxes (MBBs). MBBs are transported to the various polling locations throughout the county. Each MBB contains the same information so that they can be used in any location. In a polling place, the MBB is used to configure the Precinct Voting System (PVS) and supply ballot data for the election. The same MBB is used to return the ballot images captured by the PVS to Election Headquarters for tabulation by Tally. Once BOSS generates the file for the MBB, the BOSS database becomes locked so that no more changes can be made, thus protecting the integrity of the MBB data file. The BOSS database is subsequently used to initialize the Tally database.

1.3.3 Tally™

Tally is a software application that reads, stores, and tabulates the CVRs from the MBBs. At the close of polls on Election Day, all of the MBBs are returned to the central location, including early voting MBBs, and Tally copies the data stored on each. The MBBs contain CVRs captured by the PVS and audit trail data that authenticates the CVRs. Tally is initialized with the locked BOSS database that was used to create the election. This initialization "programs" Tally for tabulation. The only required task prior to beginning the tabulation process is to input any approved write-in candidate names.

2 Ballot Now General Specifications

The following outlines the Ballot Now general specifications. The Ballot Now software application eSlate shall:

- Provide Facilities for voting for such candidates as may be nominated and upon such questions as may be submitted;
- Permit each voter in a presidential general election to vote by selecting one box for electors for a pair of candidates for President and Vice President of the United States
- Provide a method for write-in voting and shall report the number of votes cast in each contest in the write-in voting position;
- Permit each voter to vote at any election, for any person, for any office, for as many persons for an office, and for or against any question for which the voter is entitled;
- Preclude each voter from voting for more persons for any office than he is entitled to vote for and from voting for any candidate for the same office for the same office or upon any question more than once;
- Be capable of providing ballot material as selected by election officers, so as to permit voters in primary elections to vote only for the candidates seeking nomination of the political party with which they are affiliated, or non partisan candidates only if they are not affiliated with a political party;

- Permit non partisan voters to vote either a non partisan ballot or a party ballot for any political party that has chosen to allow non partisan voters to participate in its primary election;
- Have a "public counter" which is visible at all times, which shall show during any period of voting the total number of voters who have voted during the applicable period of voting;
- Have a "protective counter" which is visible at all times, which cannot be reset and which shall record the cumulative total number of votes cast;
- Upon poll closing, the system must not permit the voting resume;
- Be so constructed, that during the progress of voting, it shall preclude every person from seeing or knowing the number of votes registered for any candidate and from tampering with any of the recorded votes;
- Register and record votes correctly and accurately.

2.1.1 The Central Tabulation System

The central tabulation system, Tally, shall:

- Be capable of accumulating and reporting by precinct the total votes cast for each candidate and for or against each question.
- Be capable of tabulating and reporting the vote cast for each candidate and for or against each question, by groups of precincts, such as legislative districts, wards and complete jurisdictions.

3 The Ballot Now Electronic Voting System Election Cycle

3.1 Pre-Election Activities

3.1.1 Create a BOSS Election Database

The eSlate Ballot Origination Software System (BOSS) from the Election Solutions Group of Hart InterCivic is a software application for creating election databases that contain ballot definitions specific to a jurisdiction and an election. The target users for this product are county-level election offices that define and produce their own ballots. BOSS can be used by election officials that may have very little training in the software and don't use it very often. The user interface is simple, yet powerful and flexible enough to do the job of defining an election ballot in a manner that can easily be assimilated by the user with election knowledge. The election database created in BOSS is used in conjunction with Ballot Now and Tally software. BOSS' primary function is to generate ballot definition information that can be used in these other products.

BOSS lays out ballots in an organized, readable fashion, and adheres to the jurisdiction's legal requirements. A single file is generated by BOSS and contains all the information necessary to support the election from any geographic location and in any required language. This file is called the Electronic Ballot Data and is written to the MBB for use by the Electronic Voting System.

3.1.2 Data Entry into the BOSS Election Database

- The steps for creating a BOSS election database include:
- Gather data for creating the BOSS election database.
- Enter all jurisdiction information into the BOSS election database.
- (Entering jurisdiction information should be done in advance of an election cycle. This information
- can be saved as a starting point for future elections.)
- Enter all election information into the BOSS election database.
- Proofread all information entered into the BOSS election database.
- Create test or official MBBs.

3.1.3 Verify the Data in the BOSS Election Database

- Generate BOSS reports and compare the data to the information you gathered and organized prior to data entry.
- Check for all Contests on ballot and candidate/proposition spelling is correct
- Verify the correct number of votes allowed in each contest
- Verify that write-in positions are correct

3.1.4 Mobile Ballot Boxes (MBBs)

When the BOSS election database is complete, and you have created ballot formats, BOSS will write the ballot information to the MBBs for use by Ballot Now.

3.2 Ballot Inspection and Verification (BIV)

The Ballot Origination Software System (BOSS) lays out ballots so that the election subject matter is presented in an organized, readable fashion, and adheres to the jurisdiction's legal requirements. A single file is generated by BOSS and contains all the information necessary to support the election from any geographic location and in any required language. This file is called the Electronic Ballot Data and is written to the MBB for use by the Ballot Now application.

All ballot logic and accuracy functions of the Ballot Now application are static. This means that the functions are compiled, tested and verified as part of extensive system testing and certification processes and do not change between elections. The only element of the system that changes from one election to the next is the content and format of the ballots. Therefore, the ballot content and format requires verification prior to conducting an election. The ballot content is part of the normal proofing process and is accomplished as part of the ballot data entry. Once the ballots are generated in BOSS, the formatted ballots must be verified.

The pre-election ballot inspection and verification for the Ballot Now application system requires verification that the Electronic Ballot Data provides properly formatted ballots. This process requires an MBB containing the Electronic Ballot Data file and a Ballot Now station. A proof report from BOSS that lists the various ballot styles is used to

optimize the verification process. The following steps are used to perform the Ballot Inspection and Verification:

1. Create a BIV Mobile Ballot Box (MBB) in the "test" mode using BOSS
2. Open the election in Ballot Now
3. Using the ballot style proof sheet from BOSS, select representative precincts for each ballot style and print one of each, including language options
4. Review the text on each ballot and verify the following:

    - The text on the ballot is displayed as desired
    - Position of contests relative to pages and columns are accurate
    - The required contests are present

5. Close the election and remove the MBB, label it and retain, along with the ballots used for review as part of the election record.

This process verifies that the ballot(s) will be correctly presented to the voter for a given revision of the Electronic Ballot Data. Formatting errors or changes require that the information be updated in BOSS, generation of new ballots and repeating the above process.

NOTE: A record of the votes cast for each candidate during this process is not required.

4 Election Procedures

4.1 Ballot Now Setup

Ballot Now receives the information for an Election from an MBB that is created by the Ballot Origination Software System application.

All ballot page layout and print formatting for paper ballots is handled by the BOSS application, except for optional serial numbers and ballot stubs which are added in Ballot Now. The information for printing all ballot types for the Election is then transferred to Ballot Now using an MBB.

4.2 Printing Ballots

4.2.1 Pre-Printing Set Up

Before printing Ballot Now Test, Sample, or Election ballots, you must:

- Load the correct paper into the printer (60 to 80 lb. Offset weight; California Certified Paper with the dimensions that were selected in the BOSS application).
- Select the preferences for printing ballots in the Ballot Printing tab of the Program Options window.

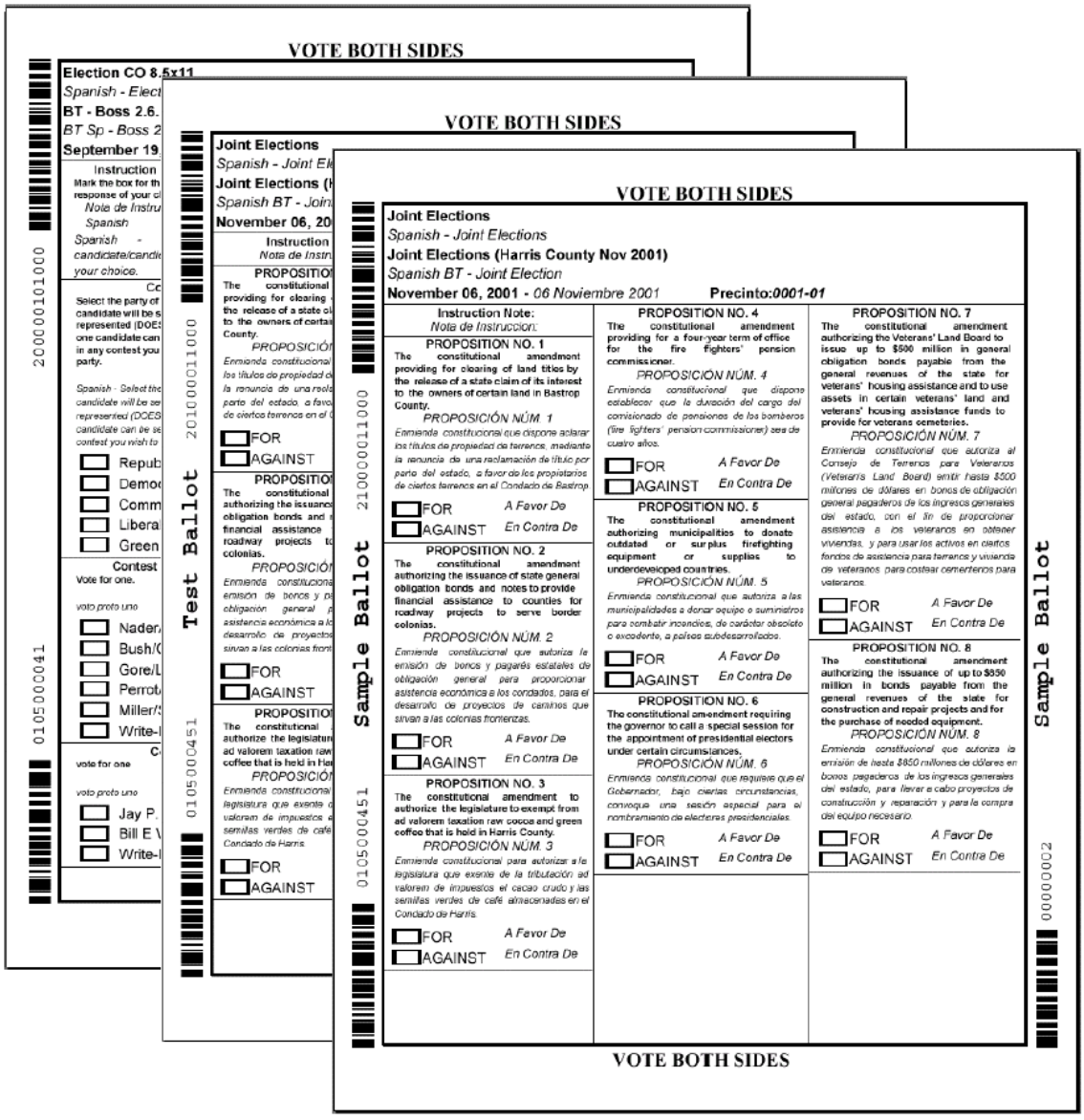
The preferences for printing ballots include the following items:

- Select Printer – for selecting the printer that can print the ballots on the correct paper size.
- Print Duplex Ballot – for printing both sides of the paper.
- Include and Set Up Ballot Stub – for printing a ballot stub on the ballots.
- Enable Ballot Serial Numbering – for including serial numbers on the ballots.

4.2.2 Printing a Ballot:

You can print the number of ballots required for the number of voters in a precinct or a single ballot may be printed. To print ballots:

- Turn on the printer and load the correct paper.
- Set printing preferences.
- Open the Print Selection window; select the precinct, the number of copies, and the beginning serial number.
- Select the type of ballot to print (Test, Sample, or Election).
- Click Preview in the Print Selection window to review the ballot.
- In the Print Selection window, click Print to print the ballots.



4.3 Scanning Ballots

Scanning ballots is a three-part process: Pre-Scan, Scan, and Post-Scan.

4.3.1 Pre-Scan

- An MBB for the present election must be installed in the PC Card drive.
- Set program options for scanning.
- Ballots are grouped into batches for convenience and document management.
- A batch of ballots is loaded into the scanner.

4.3.2 Scan

- The loaded batch of ballots is scanned.
- After a batch is scanned, a Batch report is printed and attached to the batch.

4.3.3 Post-Scan

- Ballots that have overvotes, undervotes, or write-ins, and blank ballots must be resolved.
- The Cast Vote Records (CVRs) are written to the Election MBB.

4.4 Resolving Ballots

Before you can write all the CVRs to the Election MBB, the operator must:

- Resolve overvoted and undervoted ballots.
- Resolve write-in votes.
- Resolve blank ballots.

If desired, Ballot Now can automatically resolve overvoted, undervoted, or blank ballots. If the CVRs have not yet been written to the Election MBB, a scanned batch can be deleted and re-scanned if necessary. After finishing a session of scanning ballots, the CVRs can be saved to the MBB.

4.5 Central Counting

Jurisdictional procedures may require that the entire JBC be returned to Election Headquarters, or require that the MBB be removed from the JBC, so that only the MBB is transported to Election Headquarters.

1. MBB Transport: If the instructions are to remove the MBB from the JBC at the end of the day, remove the Security Seal over the MBB slot on the side of the JBC. Take the MBB out of the slot and place in its carrying case return to Election Headquarters.

2. JBC Transport: If the instructions require that the entire JBC be transported to Election Headquarters, without removing the MBB, unplug the JBC and disconnect it from the eSlate, then return the JBC to the Election Headquarters.

5 Tabulation and Records Retention

5.1 Tabulation

On or before Election Day, the BOSS database for the election is used to initialize the Tally database for tallying the election. Acceptable write-in candidate names or aliases are input into Tally. When all the polls have closed, the MBBs from the polling sites are read into the Tally System. The unique serial number in the MBBs is used to prevent duplicate storage of the information in the MBB. The Tally System tabulates the Cast Vote Records from the PVS MBBs and generates reports that can be viewed on screen

and/or printed. When all MBBs have been read by Tally, the election officials resolve write-in votes and Provisional Ballots from contested voters. The Tally database is closed and archived when the officials determine all information for the election has been stored and resolved in the Tally System.

5.2 Archiving

At the close of the election, all data from the election is to be archived. Archiving of data is a simple process of copying information to a CD. The Tally application stores the complete record of the election. The BOSS database is used to initiate Tally, and when the MBBs are read into Tally, all CVRs and PVS audit data are stored by Tally. By copying the Tally database to CD you have archived the entire election. It is recommended, however, to archive the BOSS database separately, as well, so that both ends of the election cycle are distinct datasets. This will aid any subsequent review process that may be required. The data is copied to a CD-R disc (a read-only CD) using standard CD-writing software. Once the write process closes the CD-R disc, no additional information can be written to the disc, and the disc will function as a read-only disc.

5.3 Retention

Master copies of the Cast Vote Records and the accumulated results from Tally shall be retained in secure locations designated by the local election official and separate from the location of working copies from the time of completion of pre-election Ballot Inspection and Verification process:

- For as long after the election as required by law; or
- By order of a court or directive of the Secretary of State

After certification of the election results, any changes to the central tabulating software or the ballot results sets shall be completely documented in the central system internal audit log. Ballot control logic source code shall be placed in escrow pursuant to state law.

Upon certification of the election results, elections code section 17300 through 17306 and 15307 apply to the handling security and disposition of unused materials. The retention of electronic ballots and related election materials is six months for all elections if no federal elections are involved. The federal election retention period is twenty-two months. Retention periods may be extended in the event of a court challenge.

6 Official Canvass and Post-Election Procedures

The official canvass consists of a post-election audit of the polling place returns and the absent voters returns;

- To validate the outcome of the election by verifying that there were not more ballots cast than the sum of the numbers of voters who signed the precinct Roster/Index and who applied for and were issued absent voter ballots;

- To ensure that all required certificates and oaths were properly executed by the precinct board; and,
- To verify the accuracy of the computer count by manually recounting the voter ballots from at least one percent of the voting precincts and comparing the manually-tallied results to the computer-generated results.
- Each official canvass function must be performed by a minimum of three persons

6.1 Process provisional ballots

- Verify eligibility of provisional ballots
- Process in the manner prescribed for Ballot Inspection Boards

Identify original or duplicate provisional ballots by precinct and deliver to the designated official for updating computer tallies

6.2 Reconcile Tabulation

- Compare the number of voters on precinct report to the number in the Roster-Index issued by the elections official. Resolve or explain any discrepancy.
- Verify that the number of ballots voted (including provisional), plus absentee mail-in equals the number received by the precinct. Resolve or explain any discrepancy.
- Reconcile Absent Voter Ballots
- The elections official is accountable for absent voter ballots to the same extent, as nearly as practicable, as for precinct ballots.
- Process any outstanding absentee ballots not counted in the semi-official count.
- Canvassing Write-ins
- Examine the write in candidates on the mail absentee ballot and the write in candidates from the write-in report generated from the electronic ballot stations to verify that the names written in are for valid candidates.
- Prepare “Statement of Write-In Votes” for inclusion in the official “Certified Statement of Election Results.”

6.3 Automatic Manual Recount in One Percent of the Precincts

6.3.1 Sample Size

For the purpose of validating the accuracy of the computer count, within fifteen days after every election at which the Electronic Ballot Stations are used, a public manual recount of the ballots cast in at least one percent of the precincts, chosen at random, shall be conducted as to all candidates and ballot measures voted on in each of the precincts. If the random selection of precincts results in an office or ballot measure not being manually recounted, as many additional precincts as necessary shall be selected and manually recounted as to any office or ballot measure not recounted in the original sample

6.3.2 Sample Selection

Precincts selected at random pursuant to Elections Code section 15645 shall not be chosen by an individual who is designated by the responsible elections official and who is not the same person responsible for programming the electronic ballot. Selected precinct numbers shall not be revealed to the person/s responsible for programming the electronic ballot until the semi-official count is complete.

6.3.3 Count Discrepancy

If a discrepancy is discovered between the automated tally and the automatic manual recount tally, the votes will be tabulated again.

6.4 Manual Recount Procedures

6.4.1 Request for Recount

A request for a recount and the conduct of the recount shall be made in accordance with the Elections Code section 15600 and following.

6.4.2 Observers

Each candidate and each side in the case of a ballot measure, shall be allowed not more than two observers for each recount board, and may not touch or handle the transport media. All questions must be directed to the elections official in charge of the recount.

6.4.3 Hours of Operation

Prior to the beginning of the recount, all parties will be notified of the hours of operation

6.4.4 Ballot Supervision/breaks

At least two people will attend ballots at all times during the recount, including breaks and lunch periods. Recount boards will be permitted break periods in the morning and afternoon, in addition to a lunch break. They will not stop for a break or for lunch while recounting a precinct.

7 Audit Logs

7.1 BOSS Audit Log

The BOSS Audit Trail report provides audit trail data of activity in the BOSS database for an election. The date, time, event name, transaction type, and user ID is included for each event printed in the BOSS Audit Trail report. The operator can view and/or print the BOSS Audit Trail report at any time during the creation of an election. The primary sort order for the report is alphanumeric by timestamp; the secondary sort order for the report is alphanumeric by action.

7.2 Ballot Now Audit Log

The Ballot Now application maintains a complete audit log of the events that occur during an election. Ballot Now maintains three audit trails. One audit trail consists of an

audit trail specifically dealing with MBB data transactions. This audit log is managed by the MBB interface and is viewable using MBB utilities.

Another audit trail consists of an audit log specifically designed to track the usage of the Ballot Now functions. This audit log shall remain on the Ballot Now system, associated with an election. This audit log is viewable through a Ballot Now report.

- The third audit trail is maintained by the Ballot Now audit tables in the database. This audit log is viewable by using database utilities. Every Ballot Now audit log entry shall contain the date/time stamp and the login user ID.

7.3 Tally Audit Log -- Real-Time Print-Out

The Tally System application prints a real-time audit log to the system line printer. The real-time audit messages include a log of the operator's activities with the Tally System application and error messages presented during a session. The date, time, event name, and user ID is included for each event printed in the audit log.

8 Certification and Reporting Requirements

8.1 Biennial Certification of Hardware

Elections code section 19220 requires elections official to inspect and certify the accuracy of their voting equipment at least once every two years. The elections official shall certify the results of this inspection to the Secretary of State.

8.2 Hardware Certification and Notification

8.2.1 Certification

All vote tabulating equipment must be certified for use in elections by the Secretary of State prior to use in any election Certification Procedures are available upon request from the Secretary of State's Elections Division.

8.2.2 Notification

For each statewide election the responsible county official shall cause to be prepared a list, including quantities, of all equipment to be used to tabulate votes during the semi-official and official canvass.

- Seven days before each statewide election, the elections official shall certify to the Secretary of State the results of the logic tests as well as the accurate functioning of all ballot counting equipment. This certification shall also affirm the use of the same equipment for pre-election testing and for semi-official and official vote canvass. In the event of a change to the ballot tabulation program occurring after this certification an amended certificate shall be submitted no later than the day before the election.

- In the event any equipment is repaired, altered or replaced following the certification specified, and prior to completion of the official canvass of the vote, an amended certification of logic and accuracy testing and a revised list

of equipment used must be submitted to the Secretary of State not later than submission of official canvass results.

8.3 Election Observer Panel

All procedures prescribed herein shall be carried out in full view of the public insofar as feasible. In addition, the responsible elections official shall devise a plan, subject to the approval of the Secretary of State, whereby all critical procedures of the vote tabulation process described herein are open to observation by an Election Observer Panel. Representatives of the qualified political parties and representatives of the news media shall be among those invited to serve on this Panel and shall be given the opportunity to observe that the correct procedures have been followed in the receiving, processing and tabulation of the voted electronic ballots.

8.4 Logic and Accuracy Certification

Logic and Accuracy Board shall be appointed by the responsible elections official and, insofar as is practicable, shall be comprised of the same persons prior to, during, and after the election. The board shall have the following duties:

- Receive from the elections official all required test materials and take steps to ensure the security of said materials prior to, during, and after the election, except when the materials are properly in the possession of one of the other boards of elections officials as required by these procedures.

- Verify the correctness of the program, logic and accuracy test program. This verification shall also be required for any of said material that must be replaced.

- Observe the performance and verify results of all required tests.

- Note any discrepancies and problems and affirm their resolution or correction.

- Deliver into the custody of the elections official all required test materials and printed output.

- Certify to the performance of each of the above prescribed duties as well as those otherwise established by the procedures; provided that all members of the Board shall sign the appropriate certificate or certificates. Final pre-election certification shall be made to the Secretary of State no less than seven days before each statewide election. The responsible election official shall make this certification based on the Logic and Accuracy Board's certification of successful testing. In the event an amendment to the ballot counting program is required following this certification, the elections official must immediately re-certify to the Secretary of State.

9. Computer Security and Recovery

9.1. General Security Considerations

The idea of computer security is to secure your computer and your eSlate Electronic Voting System software application against unauthorized use, alteration, or deletion. The people against whom you are securing your computer vary from the co-worker who wants to surf the Internet to hackers attempting to subvert elections. Computer security is always a balancing act between security and ease of use. In the following you will find tips and techniques towards maintaining a secure computer environment. It is up to the election administrator to choose and implement the appropriate level of computer security.

9.2. Physical Security

9.2.1 Controlled Access Environment

Computers should be operated in a room that is limited to only authorized personnel. The room should be locked except during working hours.

9.2.2 Lock Your Computer to a Desk

Computers should be locked to a desk, table, or stanchion using a Kensington or similar lock. The cost of recreating the data lost in a stolen election computer could be many times the cost of the computer itself.

9.2.3 Lock Your Computer to a Desk

The housing of a computer should be locked to prevent unauthorized people from accessing the computer boards, memory and hard drives. No data is safe from talented intruders with access to the inside of your computer.

9.2.4 Lock Your Floppy Drive and CD Drive

The floppy drive and CD drive of your computer should be physically locked against unauthorized use. Hackers that can boot your machine onto their floppy or CD may be able to install malicious software on your computer, read your hard drive, or alter your BIOS settings.

9.2.5 No Network

The computer running the eSlate *TM* Electronic Voting System election software should not be connected to a county's computer network. Most computer security attacks are through a network, which allows a hacker to work anonymously and provides a handy access path to your computer.

9.2.6 No Internet Access

The computer running the eSlate *TM* Electronic Voting System election software should not have access to the Internet. Computer security attacks can be made through active Internet connections. In addition, even an employee innocently browsing the web can unknowingly download malicious viruses.

9.3. Disaster Security

Back Up Your Data: Frequently back up important election data created using eSlate *TM* Electronic Voting System election software. Properly label back-up data disks and store them in a secure location.

9.4. Operational Security

9.4.1. Always Log Off Computer

Log off your computer anytime you are not actively using the eSlate *TM* Electronic Voting System election software, even if you leave your terminal for just a few minutes.

9.4.2 Never Give Administration Privileges

If the county is given administration passwords with the computer hosting the eSlate *TM* Electronic Voting System election software, administrators must never give the administration password to any regular operator. A regular election worker can perform his or her work well without the use of administrator passwords. An election official should never log in as an administrator unless they need to perform a function only available as an administrator. At least two persons in the jurisdiction should have administrator passwords.

9.4.3 The BOSS software supports user permissions identified as "ALL" and "Update". Under certain conditions in BOSS release version 3.03.44, some functions performed when logged under an "ALL" permission will remove permissions for performing some functions by an "Update" user. These Update functions include: Create database, enter districts/precincts and import translated text. If this condition occurs, see the system administrator.

9.5.Data Security

9.5.1. Never Run Personal Software on Computer

No personal software of any kind should be run on computers hosting eSlate *TM* Electronic Voting System election software. These computers should be used for election purposes only. No programs should be installed unless authorized personnel have previously approved them and they have been tested for viruses, worms, Trojan horses or other malicious code. Even seemingly innocent software can introduce viruses into your computer.

9.5.2 Protect Against Viruses

Regularly run the anti-virus software that comes standard on your eSlate *TM* Electronic Voting System computer. Be sure to run the software immediately prior to each election. Register the computer with your county's computer support specialist so they can provide anti-virus software updates as they become available.

9.5.3 Password Security

Selecting, storing, and changing your password properly is vital to computer security. A typical 8-character password has trillions of possible combinations and, if properly

picked and managed, can help keep your computer be secure. But passwords that are taped to the screen or keyboard, passwords that the user has used on their primary desktop machine, or passwords like "bob2" are not very secure at all. Never give anyone your password or let them use your login.

9.5.4 Change Your Password Frequently

Your password should be changed at least every 6 months and before each election. Immediately change the password when the administrator gives it to you initially. Administrators should remove usernames and passwords when employees are no longer engaged in election business.

9.6. Precinct Voting Security

Voting terminals should be kept in a secure location after being programmed for the election both before and after distribution to the precinct.

9.7. Security Seals

Security seals that are tamper evident should be installed on any key locks, access doors/panels, and unused ports on any component of the sytem. Logs should be kept to record the use of each seal.

10. Software Operation and System State

Software is not bug-free. The most popular computer operating system in the world still has software bugs in it that can cause your computer to produce an error or lock-up. The same is possible for your eSlate *TM* Electronic Voting System election software. The eSlate *TM* Electronic Voting System election software has an extensive list of error messages that are displayed in clear English and are related to whatever action you were involved in at the time of its occurrence. This is not an abnormal system state and is resolved by acknowledging the error and correcting the condition. An abnormal system state results in a cryptic "computer-type" message. Given the combination of the operating system (Windows NT) and the eSlate *TM* Electronic Voting System applications, you may encounter an abnormal system state. If such a state occurs within one of your eSlate *TM* Electronic Voting System election software applications, your data is safe. The applications are designed to require frequent "saves" of your data, so should an error or lock-up occur, the data that existed at the time of your last save action is secure. In all cases, write down the exact error message, the conditions under which it occurred, and forward the information to your customer service contact. In most instances, you will be able to continue working by resolving the error or power cycling the computer. Match your condition to those given below and follow the steps given for each.

10.1. Error Message with "OK" button

Read the error message and write it down. If the message contains any information about the data that you were entering at the time, it should indicate the problem, select

"OK" and correct the data or re-try the event. If no description is given, select "OK" and continue with your task. If the problem persists, contact customer service.

10.2. Application Locks-up

If the application locks-up, the mouse pointer or the keyboard will not responds. By pressing CONTROL-ALT-DELETE, the Windows NT Task Manager will come up and allow you to shut down the application. Again, data entered and saved is safe. If the problem persists, contact customer service.

10.3. Windows NT Error or Locks-up

Windows errors or lock-up are best resolved by either shutting down the task causing the problem as described above, or by power-cycling the computer. Power cycling requires the power be turned off and then back on again. When Windows is shut down in this manner and subsequently turned back on, Windows will run a series of diagnostics that you my have to respond to. If the problem persists, contact customer service.